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PATENT LBNL# IB-1504B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application)
Inventor(s): Bernard Santarsiero, et al) l.)
1. 1 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.) Art Unit: 1754
Application No.: 10/026,362)
) Examiner:
Filed: December 21, 2001	
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Title: METHOD FOR SCREENING	G)
MICROCRYSTALLIZATION	NS)
FOR CRYSTAL FORMATIC	<u>)</u>
Mail Stop IDS	,
Commissioner for Patents	
P.O. Box 1450	
Alexandria, VA 22313-1450	

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Howard M. Peters (Reg. No. 29,202)

TRANSMITTAL LETTER

Sir:

Enclosed herewith are the following documents:

- 1. Transmittal Letter in Duplicate (2 pgs);
- 2. IDS Transmittal Time of Transmittal (3 pgs);
- 3. USPTO 1449 Forms (8 pgs);
- 4. IDS Transmittal Statements (4 pgs);
- 5. Volumes 1, 2, 3, A and B of references (U.S. patents and publications in volumes 1 and 2 are submitted herein hard copy and electronically in subsequent applications; and
- 6. Postcard.

If fees are required for the filing of these documents, the Assistant Commissioner of Patents is hereby authorized to charge or credit any overpayment to Deposit Account No. 16-1331.

Respectfully submitted,

Date: April 16, 2003

Howard M. Peters (Reg. No. 29,202)

Attorney for Applicant

PETERS, VERNY, JONES & SCHMITT, L.L.P.

425 Sherman Avenue, Suite 230

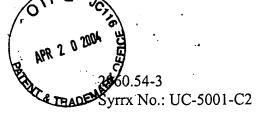
Palo Alto, CA 94306

Telephone: (650) 324-1677 Facsimile: (650) 324-1678

Attorney Docket No. 2960.54-3

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PATENT LBNL No.: IB-1504B

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In re Application)
Inventor(s): Bernard Santarsiero, et al.)
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TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
WITHIN THREE MONTHS OF FILING OR
BEFORE MAILING OF FIRST OFFICE ACTION (37 C.F.R. § 1.97(b))
AND/OR
AFTER FILING AFTER MAILING OF OFFICE ACTION (37 C.F.R. § 1.97(c))

Sir:

STATEMENTS

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

2960.54-3

Syrrx No.: UC-5001-C2

2

PATENT LBNL No.: IB-1504B

Applicants submits this entire IDS for the hard copy U.S. Patents and U.S. Patent Publications. The hard copy patents, patent publications, literature publications, etc. are submitted concurrently in Vols. 1, 2 & 3 and Vols. A and B.

The filing of this information disclosure statement (IDS) shall not be construed as a representation that a search has been made (37 C.F.R. § 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability (37 C.F.R. § 1.97(h)), or that no other material information exists.

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IDENTIFICATION OF PERSON(S) MAKING THIS INFORMATION DISCLOSURE STATEMENT

The person making this statement is (check each applicable item)

the inventor(s) who signs below
SIGNATURE OF INVENTOR an individual associated with the filing and prosecution of this application (37 C.F.R. § 1.56(c))
SIGNATURE OF INDIVIDUAL
the practitioner who signs below on the basis of the information: (check each applicable item)
\square supplied by the inventor(s).
 □ supplied by an individual associated with the filing and prosecution of this application. (37 C.F.R. § 1.56(c)). □ in the practitioner's file.

Customer No.: 23308

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PATENT LBNL No.: IB-1504B

Syrrx No.: UC-5001-C2

David Weitz, Esq. (Reg. No.: 38,362) who filed this U.S. patent application provided the PTO-1449 form & the references for submission.

The patents and patent publication in hard copy are found in this U.S. Ser. No. 10/026,362. A sheet indicating the other copending patent applications is attached.

It is planned that this IDS will be filed shortly in all these US patent applications.

Also see references in parent USSN 09/336,134 and USSN 09/851,397.

If additional fees are required for the filing of these documents, the Commissioner of hereby authorized to charge or credit an overpayment to Deposit Account No. 16-1331.

Respectfully submitted,

Date: April , 2004

Howard M. Peters (Reg. No. 29,202)

Attorney for Applicant

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Customer No.: 23308

Enclosures:

PTO 1449 Forms and References

Volumes 1, 2, 3, A and B

Sheet of related copending US patent applications

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.54-2	09/851,397	05/07/01	. A	C1
.54-3	10/026,362	12/21/01	В	C2
.54-4	10/119,237	04/08/02	С	C5
.54-5	10/119,332	04/08/02	D	C 6
.54-6	10/119,187	04/08/02	E	C3
.54-7	10/119,206	04/08/02	F	C4
.54-8	10/323,037	12/18/02	G	C7
.54-9	10/323,319	12/18/02	Н	C8
.54-10	10/323,378	12/18/02	I	C9
.54-11	10/322,952	12/18/02	J	C10
.54-12	10/323,949	12/18/02	K	C11
.54-13	10/323,054	12/18/02	L	C12
.54-14	10/324,022	12/18/02	M	C13
.54-15	10/334,336	12/31/02	N	C14
.54-16	10/334,396	12/31/02	0	C15

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MFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

of

Complete if Known

Application Number 10/026,362

Filing Date December 21, 2001

First Named Inventor Bernard Santarsiero et al.

Group Art Unit 1754

Examiner Name Maribel Medina

Attorney Docket Number 2960,54-3

U.S. PATENT DOCUMENTS Name of Patentee or Applicant of Document Number Publication Date/ Pages, Columns, Lines, Where Relevant Cite No.1 Examiner Cited Document Issue Date Passages or Relevant Number - Kind Code² (if known) Figures Appear US- 4,900,147 ΑΑ Bowley et al. 02-13-1990 US-4,909,933 03-20-1990 AB Carter et al. US-5,009,861 04-23-1991 Plass-Link AC ΑD US- 5,013,531 05-07-1991 Snyder et al. ΑE US-5,076,698 12-31-1991 Smith et al. US- 5,106,592 04-21-1992 ΑF Stapelmann et al. US- 5,124,935 06-23-1992 Wallner et al. AG 03-16-1993 ΑН US-5,193,685 Trevithick US-5,256,241 10-26-1993 ΑI Noever US-5,544,254 08-06-1996 ΑJ Hartley et al. AK US-5,581,476 12-03-1996 Osslund US- 5,790,421 08-04-1998 ΑL Osslund US- 5,855,753 01-05-1999 Trau et al. AM US- 5,973,779 10-26-1999 AN Ansari et al. US-5,985,356 11-16-1999 Schultz et al. AO US-5,997,636 12-07-1999 AP Gamarnik et al. US-6,036,920 03-14-2000 Pantoliano et al. AQ AR US- 6,069,934 05-30-2000 Verman et al. US- 6,268,158B1 07-31-2001 AS Pantoliano et al. ΑT US-2001/0016191A1 08-23-2001 Osslund ΑU US-2001/0016314A1 08-23-2001 Anderson et al. 09-06-2001 ΑV US-2001/0019845A1 Bienert et al. US-6,297,021B1 10-02-2001 Nienaber et al. AW 10-11-2001 US-2001/0027745A1 AX Weigl et al. US-6,303,322B1 10-16-2001 AY Pantoliano et al. 10-25-2001 US-2001/0032582A1 DeTitta et al. ΑZ US- 2001/0055669A1 12-27-2001 Schultz et al. BA B8 US- 2001/0055775A1 12-27-2001 Schultz et al. US-2002/0022250A1 02-21-2002 BC Hendrickson et al. US- 2002/0048610A1 04-25-2002 BD Cima et al. US-2002/0054663A1 05-09-2002 ΒE Olson et al. US- 2002/0062783A1 05-30-2002 BF Bray

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Olson et al.

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Unger et al.

DeLucas

06-06-2002

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07-09-2002

08-08-2002

10-10-2002

11-07-2002

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³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number 10/026,362

Filing Date December 21, 2001

First Named Inventor Bernard Santarsiero et al.

Group Art Unit 1754

Examiner Name Maribel Medina

Attorney Docket Number 2960.54-3

(use as many sheets as necessary)

Sheet 2 of 8

ВМ	US- 2002/0169512A1	11-14-2002	Stewart	
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 BU	US- 6,592,824B2	07-15-2003	DeLucas et al.	

		FOREIGN P	ATENT DOC	UMENTS 😹		
Examiner	Cite	Foreign Patent Document	Publication	Name of Patentee or Applicant of	Pages, Columns,	
Initials*	No.1	Country Code ³ - Number ⁴ - Kind Code ⁵ (<i>if known</i>)	Date MM-DD-YYYY	Cited Document	Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	BV	WO 99/04361 A1	01-28-1999	Gester et al.		
	BW	JP02001013054A (Abstract only)	01-19-2001	Soda et al.		
	BX	WO 01/26797 A2 and A3	4-19-2003	Eickhoff et al.		
	BY	WO 01/92293 A2	12-06-2001	Kuil et al.		
	BZ	WO 02/093139 A2	11-21-2002	Stewart		

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Figures Appear

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Attorney Docket Number 2960,54-3

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Number - Kind Code² (if known)

U.S. PATENT DOCUMENTS						
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FOREIGN PATENT DOCUMENTS						
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Initials*	No.1	Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Where Relevant Passages or Relevant Figures Appear	T ⁶

	_	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	·
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	AAA	ABOLA, ENRIQUE et al., "Automation of X-ray crystallography", Nature Structural Biology, Structural Genomics Supplement, (11/2000), pp. 973-977.	
	AAB	Presentation: "PBD/Research/Research Areas/ AUTOMATION" (2/28/02), http://www.lbl.gov/LBL- Programs/pbd/xl_research/automation.html 4 pages.	
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Examiner	Date
Signature	Considered

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Application Number	10/026,362	
Filing Date	December 21, 2001	
First Named Inventor	Bernard Santarsiero et al.	
Group Art Unit	1754	
Examiner Name	Maribel Medina	

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Sheet

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Examiner Signature	Date Considered	

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STATEMENT BY APPLICANT

Complete if Known Application Number 10/026,362 Filing Date December 21, 2001 First Named Inventor Bernard Santarsiero et al. Group Art Unit 1754 **Examiner Name** Maribel Medina 2960.54-3 Attorney Docket Number

(use as many sheets as necessary) Sheet 8

ABO

Website: "A recipe to grow crystals of lysozyme by the gel acupuncture technique: Granada Crystallization Box", AAZ http://lec.ugr.es/GranadaCrystBox/GCB (4/11/02), 7 pages. HEINEMANN, UDO et al., "The Berlin "Protein Structure Factory" Initiative", Scientific Concepts, ABA http://www.rzpd.de/psf/s_concept2.html (12/21/01), 16 pages. Press Release: "High-throughput protein crystallization screening and polymorph screening", (Abstract) ABB http://www.steinbeis-europa.de/db/ircnet_details.php?BEREICH=LIFE&TYP=Offer&BB (5/7/01), 2 pages. HOSFIELD, DAVID et al., "A fully integrated protein crystallization platform for small-molecule drug discovery" ABC (2003), Journal of Structural Biology, 142, pp. 207-217. JING, HUA et al., "New structural motifs on the chymotrypsin fold and their potential roles in complement factor ABD B", Euro. Mol. Bio. Org., Vol. 19, No. 2 (2000), pp. 164-173 JÍNG, HUA et al., "Structures of Native and Complexed Complement Factor D: Implications of the Atypicall His57 ABE Conformation and Self-inhibitory Loop in the Regulation of Specific Serine Protease Activity", J. Mol. Biol. 282 (1998), pp. 1061-1081. JING, HUA et al., "Structural basis of profactor D activation: from a highly flexible zymogen to a novel self-ABF inhibited serine protease, complement factor D", Euro. Mol. Bio. Org., Vol. 18, No. 4 (1999), pp. 804-814. Press Release: "Joint Center For Structural Genomics Funded to Advance High-Throughput Protein Structure ABG Determination", http://www.sdsc.edu/Press/00/092600.html (9/25/00), 3 pages. JONES, RONALD et al., "Fully Automated Preparation of Hanging Drop Protein Crystallization Plates, Abstract ABH from ACA01 meeting, http://www.hwi.buffalo.edu/ACA/ACA01/abstracts/text/W0352.html (2001), 1 page. JURISICA, I. et al., "High Throughput Macromolecular Crystallization: An Application of Case-Based Reasoning ABI and Data Mining", Methods in Macromolecular Crystallography, IOS Press (2001), pp. 9-14. ABJ KAM, Z. et al., "On the Crystallization of Proteins", J. Mol. Biol. 123 (1978), pp. 539-555. KOLTAY, PETER, "A Novel Fixed Volume Dispenser for the Massive Parallel Liquid Handling of Nanoliter ABK Volumes", Abstract for Presentation, http://www.eurolabautomation.org (10/25/01), 2 pages. KUHN, PETER et al., "The genesis of high-throughput structure-based drug discovery using protein ABL crystallography" (2002), Curr. Opin. Chem. Biol., 6, 704 - 710. LESLEY, SCOTT A. et al., "Structural genomics of the Thermotoga maritima proteome implemented in a high-ABM thoughput structure determination pipeline" (2002), Proc. Natl. Acad. Sci., 99, 11664 - 11669. ABN LOWE, JAN. et al., "Capital Equipment MRC Laboratory of Molecular Biology" (11/4/01), 4 pages.

Examiner Signature	Date Considered	

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IFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	Complete if Known		
Application Number	10/026,362		
Filing Date	December 21, 2001		
First Named Inventor	Bernard Santarsiero et al.		
Group Art Unit	1754		
Examiner Name	Maribel Medina		
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Sheet of 8 Attorney Docket Number 2960.54-3

ABP	LUFT, JOSEPH R. et al., "High Throughput Protein Crystallization: Keeping up with the Genomics", Abstract from the presentation given at Gordon Research Conference "Diffraction Methods in Molecular Biology", http://www.imca.aps.anl.gov/~ahoward/luft_ab.html (7/2000), 1 page.	
ABQ	LUFT, JOSEPH R. et al., "The development of high throughput methods for macromolecular microbatch crystallization", Hampton Research – RAMC 1999 Presentation Abstracts (1999), 1 page.	
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ABZ	Report: "Protein Microcrystallization and Structure Determination", http://wwwnsd.lbl.gov/LBL-Publications/LDRD/1999/PBD.html#Stevens (1999), 3 pages.	
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Examiner	Date	
Signature	Considered	
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Attorney Docket Number	2960 54-3	

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Application Number 10/026,362

Filing Date December 21, 2001

First Named Inventor Bernard Santarsiero et al.

Group Art Unit 1754

Examiner Name Maribel Medina

Attorney Docket Number 2960.54-3

ACV	TISONE, T.C. et al., "The Role of Non Contact Microfluidics in High Throughput Protein Crystallization", (Abstract W0282 from ACA 2002 Meeting) http://www.hwi.buffalo.edu/ACA/ACA/02/abstracts/text/W0282.html , 1 page.	
ACW	VAN DER WOERD, MARK J. et al., "About Small Streams and Shiny Rocks: Macromolecular Crystal Growth in Microfluidics" (Abstract W0210 from ACA 2002 Meeting) http://www.hwi.buffalo.edu/ACA/ACA/02/abstracts/text/W0210.html, 1 page.	
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ADA	WESELAK, M. et al., "Robotics for Automated Crystal Formation and Analysis" (2003), Methods in Enzymology, 368, pp.45 -76.	
ADB	Presentation: "Working Group on Biosciences" Chair: Graham Fleming, University of California, Berkeley, http://wwwals.lbl.gov/als/workshops/scidirecthtml/9BioSci/Word Work File L 646 (1998), pp. 175-198.	

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